Asarco

1151850 - R8 SDMS

Linda Jacobson/R8/USEPA/US
05/13/2009 12:41 PM

To Rick Wilkin/ADA/USEPA/US@EPA
cc Charles Figur/R8/USEPA/US@EPA, Randy Breeden/R8/USEPA/US@EPA, Steven Acree/ADA/USEPA/US@EPA
bcc
Subject Re: Draft ASARCO Selenium Treatment Options

I need to get them comments on their Tech Memo sometime this week...probably Friday. I am now one week overdue. I will then give them 3 weeks to put together the Phase 2 work plan, which should include the components that you touch on in your email below. Mr. Stimson, MDEQ source water, is also planning to provide me input for additional wells, parameters, monitoring points, etc. The more prescriptive that we can be in our comments...based on sound technical judgment provided by you, Randy, and Steve...the better the outcome of their efforts usually is at this facility.

So, if you or Randy have any specifics other than requiring the cross-sections, I am happy to stick those comments into my comment package that I'll be pulling together today and tomorrow. For example, regarding gw/sw interaction, Asarco has proposed using the following wells: DH-11, DH-53, DH-52, DH-10A, DH-54, DH-68, EH-122 and EH-127. Do you and Randy agree with these locations?

Any comments that you could provide to include in my comment letter would be appreciated or if you prefer to wait and review the RFI Phase 2 Work Plan, let me know.

Thanks for sharing your ideas.

Linda Jacobson

Rick Wilkin/ADA/USEPA/US

Rick Wilkin/ADA/USEPA/US
05/13/2009 12:26 PM

To Linda Jacobson/R8/USEPA/US@EPA
cc Steven Acree/ADA/USEPA/US@EPA, Randy Breeden/R8/USEPA/US@EPA, Charles Figur/R8/USEPA/US@EPA
Subject Re: Draft ASARCO Selenium Treatment Options

Hi Linda - here are some thoughts about where the East Helena characterization program might go. At some point, when the legal side settles a bit, it would be great to get together again to explore some of these and other ideas that the group has. Over the past couple of years the focus has been on identifying the limits of contamination in and north of East Helena and locating the sources of Se contamination on site. As this effort begins to reach its goals (as you point out below we are still not there yet based on some the the Se values in the new wells), I would see a next stage of characterization to develop a better understanding of the "structure of the beast". This understanding is necessary and will directly feed into any remedial design for treating groundwater contamination.

Part of this effort will be to redefine or otherwise clarify the "intermediate" and "shallow" aquifer model that we are currently working with. We know that in the pilot-PRB area (northern side of site, just west of the slag pile), arsenic is present throughout the saturated thickness in about the same concentration, independent of depth. Our conceptual model of the site suggests that as we move northwest, in the general direction of groundwater flow, to the site boundary, to American Chemets, to the highway, and to East Helena and beyond, the aquifer package thickens somewhat and incorporates a more varied

stratigraphy. This causes groundwater solutes, including As and Se, to move at different velocities at different depth intervals. The plume then takes on a more complex 3-dimensional structure. We get a glimpse of this structure when we view the "intermediate" and "shallow" plume maps. And in this sense, the distinction of these two "units" is somewhat useful. But I know that this distinction gives many a sense that we are indeed looking at two separate plumes - which may or may not be an accurate picture of the situation.

So to develop a better model of the plume configuration in 3 dimensions the first step in my mind is what you have already asked for. Generate cross-sections using all available core logs from the various well installations. From an analysis of these cross-sections, a better model of the hydrostratigraphy should come to the surface. There may be some holes to fill in with new well installations. Next, to develop a detailed sense of the chemical stratigraphy, I would suggest that we need to place a series of more detailed nested wells in selected locations. This might entail a series of wells or perhaps wells with packers installed to isolate certain depth intervals. We need more minds thinking about the options and pros/cons. Ultimately, I see us having a picture of what the plumes for As and Se look like in 3-dimensions and how they relate to one another and to the geology of the aquifer. I think we a have a lot of the needed pieces of data in hand already, that is the success of the program that you have led on site to date. Yet generating this more detailed picture will require some additional planning and work. Hopefully this is what is in mind for the site looking ahead.

Just some thoughts to kick around. East Helena was on my mind today.

Hope all is well,
Rick

Linda Jacobson---05/13/2009 10:38:02 AM---How would I get them to gather the stratigraphic information...

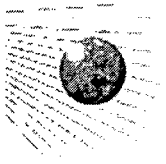
From:	Linda Jacobson/R8/USEPA/US
To:	Rick Wilkin/ADA/USEPA/US@EPA
Date:	05/13/2009 10:38 AM
Subject:	Re: Draft ASARCO Selenium Treatment Options

How would I get them to gather the stratigraphic information? I am asking for cross-sections to be drawn using existing and new well information. I need them to identify selenium source areas onsite. The plume maps point to the former Thaw House and slag pile.

Based on the selenium levels in the new wells, sent yesterday, I think more wells and collection of some surface water samples up there is necessary; what do you think?

Linda Jacobson

Rick Wilkin/ADA/USEPA/US



Rick Wilkin/ADA/USEPA/US
05/12/2009 01:29 PM

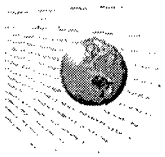
To Linda Jacobson/R8/USEPA/US@EPA
cc
Subject Re: Draft ASARCO Selenium Treatment Options

Linda - the borings would a challenge, this area of the site is cobble-rich.

I think gathering the stratigraphic information across East Helena is a very important step. I also think that we should consider moving away from the intermediate versus shallow aquifer distinctions. This has always been based on a false premise about the site hydrostratigraphy.

Rick

Linda Jacobson---05/12/2009 02:18:52 PM---Oh, good, I'm glad you're still out there and willing to provid...
Rick Wilkin/ADA/USEPA/US



Rick Wilkin/ADA/USEPA/US
05/12/2009 01:08 PM

To Linda Jacobson/R8/USEPA/US@EPA
cc
Subject Re: Draft ASARCO Selenium Treatment Options

I read through this report and it looks reasonable, no surprises.

I would like to be on the call after the review is finalized. Thanks.

Rick

Linda Jacobson---05/06/2009 05:04:31 PM---Please let me know if you have any comments on the attac...